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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/760,243 | 01/21/2004 | Kia Silverbrook | MPA12US | 1580 |

24011 7590 05/18/2006

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AUSTRALIA

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| EXAMINER |
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MARTIN, LAURA E

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| ART UNIT | PAPER NUMBER |
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2853

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,243

Applicant(s)

SILVERBROOK ET AL.

Examiner

Laura E. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook et al. (US 6439908).

As per claim 1, Silverbrook et al. teaches a printhead assembly, comprising: at least two printhead modules (figure 15, element 10) each comprising at least two printhead integrated circuits (figure 4, element 18), each of which have nozzles formed therein for delivering printing fluid onto the surface of the print media (column 3, lines 45-47), and a support member supporting the at least two printhead integrated circuits (figure 4, element 28); and a casing in which the at least two printhead modules are removably mounted (figure 2, elements 14, 32, 64, lower 76, and 94) wherein each support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits which is configured to communicate said printing fluid with the channel of the adjacent support member (column 4, lines 41-55), and at least one fluid connector is provided to connect at least one printing fluid delivery hose (figure 12, element 78); however, there is no reference number in the drawings) from a printing fluid supply to the at least one channel of the support member mounted at one longitudinal end of one of the printhead modules.

As per claim 3, Silverbrook et al. teaches a printhead assembly, wherein a sealing adhesive is provided at the interface of the interconnected at least one printhead fluid connector and printhead module (column 3, line 65-column 4, line 5).

As per claim 5, Silverbrook et al. teaches a printhead assembly, wherein the at least one fluid connector has at least one tubular portion for connecting with the at least one fluid delivery hose and the at least one tubular position is arranged to be in fluid connection with the at least one channel of the printhead module (figure 12, element 78).

As per claim 6, Silverbrook et al. teaches a printhead assembly wherein the at least one tubular portion is arranged so as to form a linear fluid connection with the at least one first channel (column 7, lines 5-15).

As per claim 7, Silverbrook et al. teaches a printhead assembly, wherein two fluid connectors (figure 3, element 42) are provided, one connected at each longitudinal end of the at least one printhead module, for providing fluid supply from both ends of the at least one channel (figure 3).

As per claim 8, Silverbrook et al. teaches a printhead assembly, wherein the at least one printhead module (figure 15, element 10) is formed as a unitary arrangement of the at least two printhead integrated circuits (figure 2, element 18), the support member (figure 4, element 28), at least one fluid distribution member (figure 8, element 72) mounting the at least two printhead integrated circuits to the support member, and an electrical connector (column 3, lines 59-65) for connecting electrical signals to the at least two printhead integrated circuits; and the support member has a plurality of

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apertures (figure 8, element 72) extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (column 4, lines 41-44).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6439908) in view of Milan. (US 5658158).

Silverbrook teaches a printhead assembly with female end portions (figure 12, element 78), in which the at least one fluid connector is arranged to interconnect (column 7, lines 5-15); however it does not disclose each support member having a complementary male and female end portions.

Milan teaches the complementary end portions (figures 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printhead of Silverbrook et al. with the disclosure of Milan in order to create an apparatus with easy assembly and disassembly.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US 6439908) in view of Lu et al. (US 2003/0007042).

Silverbrook et al. teaches a printhead assembly with sealing adhesive (column 3, line 65-column 4, line 5); however, it does not disclose the sealing adhesive being epoxy.

Lu et al. teaches sealing adhesive being epoxy [0002]

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Silverbrook et al. with the disclosure of Lu et al. in order to create a more durable printhead.

Response to Arguments

Applicant's arguments filed 2/15/05 have been fully considered but they are not persuasive.

Applicant argues that the Silverbrook et al. does not teach the fundamental elements claimed in the invention: "holds a single microelectricalmechanical chip". However, examiner each module (figure 2, element 22) has a chip (figure 2, element 18).

Applicant also argues that Lu et al. discloses a reciprocating printhead. While applicant agrees that Lu et al. discloses such an invention, it is noted that Lu et al. teaches an expoy sealant. It would be obvious Lu et al. can be combined with Silverbrook et al. to create a stronger sealing substance.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Laura E. Martin


5/12/06
MANISH S. SHAH
PRIMARY EXAMINER